

Suggestions on how to use the Joyce Country & Western Lakes geopark project region as a case study for

IRISH UNIVERSITY MODULES: Trinity College Dublin

The table below provides suggestions and ideas for teachers to use to incorporate aspects of the Joyce Country & Western Lakes geopark project within their classrooms. We want to encourage using the geopark region as an outdoor classroom, as a case study area and for the people living within it to realise what a special area it is and be proud of where they live.

We hope to design resources in conjunction with teachers, so if you are interested in working with us, please [contact us](#). We look forward to hearing from and working with you.

Please note, the curriculum information is correct as of April 2020. Only the strand units that apply to the geopark project are mentioned here.

Level: UNIVERSITY	Ideas on how to incorporate JCWL geopark with your teaching
<i>Trinity College Dublin (TCD)</i>	
<ul style="list-style-type: none"> • Geological Field Skills 1 GLU33924 • Geological Field Skills 2 GLU33925 • Sedimentology GLU33926 • Structural Geology GLU33928 • Introduction to Geochemistry GLU33934 • Microscopy and Crystalline Rocks GLU33936 • GIS and Mapping Techniques GLU33937 • Project GLU44901 	<ul style="list-style-type: none"> • Geopark as an alternative fieldtrip to what is offered. Develop a fieldtrip/ 'pack' for this module which includes basic field mapping skills. • Geopark as an alternative fieldtrip to what they offer. Develop a fieldtrip/ 'pack' for this module which includes basic field mapping skills and a focus on tectonics of a region and the geological evolution of a mountain belt. • Develop an activity to recognise sedimentary depositional environments e.g. in the road section from Finny – Kilbride: shallow to deep water. • Develop an activity using minor folds e.g. in the marble and how this can be used to infer the bigger picture of what happened in geopark area. Also opportunity for stereonet practice. • Geopark area as a case study on how geochemistry can be used to determine the tectonic regimes of the geopark area and how to determine if a mineral is economic. • Geopark area as a case study for how we can infer the parent rock of metamorphic rocks in the area based on microscopy. • Develop an activity for this module e.g. deducing geological history using the geological map, interpreting geological map, using ArcGIS/ QGIS to do an activity. • Geopark area as an ideal and suitable location for independent project as it has a lot to offer in such a small area.



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<ul style="list-style-type: none"> • Economic Geology GLU44919 	<ul style="list-style-type: none"> •Geopark area as a case study for the ore deposits found in the area. Gold, Lead and Silver. Where mineralising fluids came from, why they concentrated, types of mineralisation and how mineral exploration has occurred.
<ul style="list-style-type: none"> • Micropalaeontology and Evolution GLU44924 	<ul style="list-style-type: none"> •Geopark area as a fieldtrip/ case study for module e.g. looking at trace fossils in limestone and behaviour and environment they represent. Detail of uses of trace fossils and micro fossils. Role of fossils in biostratigraphy and chronostratigraphy.
<ul style="list-style-type: none"> • Isotope Geochemistry and Geochronology GLU44927 	<ul style="list-style-type: none"> •Geopark area as a case study for how we can infer the parent rock of metamorphic rocks in the area and the order of events based on the geochemistry of the rocks.
<ul style="list-style-type: none"> • Hydrology and Water Quality GLU34923 	<ul style="list-style-type: none"> •Using Lough Carra as a case study for this module.



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